NELSON ROBINSON, JR. HALL.
The home of the Harvard Department of Architecture. McKim, Mead & White, Architects.
Cambridge, Mass.

The Department of Architecture of Harvard University

The scheme of professional training in architecture in Harvard University is based upon the conviction that an adequate preparation for the profession of architect under modern conditions involves far more than might suffice for the production of skilled draughtsmen or constructors. To be well prepared for the practice of architecture involves and includes both these, but it implies also scholarly familiarity with the resources of the art, knowledge of the practical needs that have to be met and expressed, and a keen and intelligent sympathy with all that is best and most vital in the civilization of which architecture becomes in a very real sense the embodiment.

The Committee on Education of the American Institute of Architects in its recent suggestive report insists that the architect must rank "in the class of men of culture, learning and refinement"; he must be a "creator of beauty," "an exponent through material forms of the best secular, intellectual and religious civilization of his time," besides being "an organizer and director of manifold and various industries and activities." "From these assumptions," the report goes on, "it follows necessarily that the object of architectural education must be the breeding of gentlemen of culture, learning and broad sympathies, who understand the dignity and significance of art both as beauty and as language, who are perfectly proficient in the technique of the art they follow, and who can inspire, organize and direct widely different classes of men."

These have from the first been the ideals of the Department of Architecture at Harvard. In the announcement of the Department for 1894 it was stated that the curriculum was planned on the recognition "that architecture is essentially a Fine Art, the practice of which must be based on a thorough knowledge of construction. Great stress has therefore been laid not only on continued practice in design and drawing, but on thorough instruction in the history and principles of the Fine Art of Architecture and the arts allied with it," and "courses are included which will enable the student to understand the relation of architecture to the other arts and the relation of the art of different periods to their social and political life, a knowledge without which the architect is not likely to use the forms of his art in an intelligent and scholarly manner." And again, in an article published in the Harvard Engineering Journal for June, 1902, on "Architectural Education at Harvard University," occur the following passages: "The training of an architect under our modern conditions demands a wider scope than is often realized. An architect who is really to carry forward his art requires to be an artist, a constructor and a scholar; while if he is to succeed in his calling he must also be a good business man. All these capabilities are rarely combined to high degree in any one man, hence the necessity for the development of architectural firms. But architectural education needs to take account of all these sides of this many-sided calling, and no man can rightly regard himself as a well-trained architect who has not developed his capacities to some extent in all these directions. Even if he should devote himself to one side only of his profession, whether as principal or assistant, he will need to understand and sympathize thoroughly with all these points of view in order to work to best advantage." "As an artist the architect of modern times occupies a peculiarly difficult position. In the elder days of art, in the great periods, architectural style and expression were matters of tradition. On the firm ground of this accumulated but limited experience the architect stood ready for further advance. He worked grammatically without understanding grammar, be-

cause the forms were traditional. Accomplishment was therefore a matter of national much more than of individual achievement. In our day and country we are almost without traditions, and, however much we may deplore the fact, we cannot change our circumstances. We must take our birthright as we find it. Moreover, there seems no reasonable probability that, in any appreciable future, this condition will change. There is only one thing which can be substituted for tradition and prevent our architecture from running, as it so often has, into parrot-like imitation of bygone styles or hopeless and vulgar extravagance, and that is Scholarship. A scholarly training and a scholarly point of view is the one thing which—more than all else just now—our architecture needs as a guide and a corrective. If an architect thoroughly understands the history of the forms which he is obliged to take as a starting point, if he knows what constructive conditions, what material wants, what ideal conceptions gave rise to them, if he realizes to some extent the conditions of civilization out of which they grew—and at the same time knows and sympathizes with what is best in those of his own day—he will not misuse these forms, he will not combine such as are essentially inharmonious or use for one purpose what was intended and is only truly serviceable for another and totally different one. If besides this an architect thoroughly understands the fundamental principles on which depends the beauty of the fine things of the past, if, from the constant tracing of these laws of design as exemplified in the work of Greece, of the Middle Ages, and of the Renaissance in Italy, the observance of these principles has become second nature to him, he will have no difficulty in applying them to new conditions and in inventing new forms or new modifications. This is what I mean by Scholarship in Architecture. I believe it just now to be the one thing needful."

For these reasons the required four-year curriculum of the Lawrence Scientific School in architecture has always included, besides the study of freehand drawing, of architectural design and of construction, courses in the general history of the Fine Arts, and in the development of civilization (making use of the resources of Harvard College), and three successive full courses have been devoted to the history of architecture from the point of view both of technical development and of the relation of architecture as a fine art to civilization. In these courses constructive development is also insisted upon, and the students familiarize themselves in a practical way with the various important constructive processes. In the study of vaulting the students build large scale models of Byzantine and Gothic vaults. An advanced course in architectural history has also been maintained in which each student works under guidance on some special field in which he is particularly interested. The study of ancient and modern history, of advanced French as well as advanced German, have also been demanded as prerequisites, besides the physics and the mathematics necessary for the study of construction. Unless taken at admission these studies have been required after entering the school.

In furtherance of these ideals students have always been encouraged to take the academic course in Harvard College before entering on the work of the four-year course in architecture, and the department has always contained a good proportion of college graduates. Recently the University has felt itself strong enough, in pursuit of the general policy above outlined, to establish a graduate technical school, for admission to which a college degree is required, and at the present time five young men already holding the A.B. degree from Harvard College are candidates for the professional degree in architecture—three for the new degree of Master in Architecture, which is given after at least two years of concentrated professional work following their graduation from college. The course in this higher technical school and the candidacy for its degreees are open to holders of any Bachelor's degree from a college or scientific school of good standing. This course distinctly puts the study of architecture in its right place as one of the

FIRST YEAR WORK—EXAMPLE OF THE DORIC ORDER.

FREEHAND DRAWING OF THE SECOND YEAR.

learned professions, and places the technical courses in the new graduate school on a par with the Harvard Medical School and the Harvard Law School, which also demand a college degree for admission. But the Department of Architecture, like the other Departments of the new Graduate School of Applied Science, is still in a period of transition, and for the present the four-year curriculum of the Lawrence Scientific School will be maintained side by side with the new scheme of work.

While thus insisting on a broad general training, the work is so arranged, in either of these schemes of study, that at least four years' continuous work in architectural design and in freehand drawing is demanded for the degree, besides the study of masonry and carpentry construction, elementary statics, strength of materials and structural design. The work in freehand drawing includes drawing from the cast in pencil and wash, water-color, pen and ink work, and drawing from the life. A half-year is devoted to clay modeling as an important discipline in grasping architectural detail in the round and in handling mass and light and shade.

In architectural design the first two years of work are preparatory. This work includes a thorough grounding in the orders and the elements of architectural form, lectures and exercises on the fundamental principles of design in the fine arts with especial reference to architecture, and elementary academic problems in architectural design and a training in elementary decorative design. The work is carried on mainly by problems and criticisms. The student is taught to regard not only the merely decorative quality of the forms used but their value as terms of expression. He is taught to understand the origin and meaning not only of the larger motives but of each detail, and so to appreciate that beautiful architectural forms are organic expressions of structural functions. He learns for instance the orders not as mechanical formulae but as vital and beautiful expressions of structure, and as he learns them through design he forms the habit of working intelligently and with freedom, and of attacking each new problem in a vital way. He is taught to avoid on the one hand blind copying, or merely archaeological study, and on the other capricious innovation for the sake of novelty. He is taught to regard every piece of design he undertakes as a problem to be artistically and sympathetically solved as an outgrowth of its conditions in the way that seems to him most natural and expressive; and above all he is taught to seek beauty as the main aim of all that he does.

In all the work in design the endeavor is to consider detail always in its relation to the design of the building taken as a whole, and while insisting on the importance of delicacy of feeling and thoughtful designing in the treatment of detail, to teach the student to regard the detail always as subordinate to the large

conception of the whole design, whether considered decoratively or with regard to constructive expression. In the study, therefore, of the elements of architectural form at the very beginning of the course—the orders, for instance, are studied as essential parts of the buildings to which they belong, and the study of these forms is accompanied by the designing of simple structures in which they are used. The form of good detail is thus seen to be not arbitrary or capricious, but the beautiful and appropriate expression of a structural idea. So also in the study of more advanced design, executed designs are first analyzed and the student is taught to see how the exterior of every well-designed building must be the outgrowth and expression of its plan and interior arrangement as these are of the practical conditions of the problem. This is emphasized by having the students make designs from verbal description, the programme having first been analyzed, and then at the same scale draw out for comparison with their own design the design that has been described. These exercises are rapidly done, occupy but little time and are valuable in accustoming the student to the analysis of the plan as an outgrowth and harmonious expression of given conditions and as the basis of the elevation. The advanced work in design is carried on, as in all our schools of architecture, by means of problems and criticisms. The designs are always started by eight-hour preliminary sketches made by the student without guidance or assistance. These sketches are criticized before the class and then each student elaborates his design, with such modifications as are suggested, under the daily criticism of the instructors over the drawing boards. The problems usually occupy a month or six weeks. Shorter problems lasting four or five days are also given from time to time, to widen the student's experience and to encourage rapidity in seizing and expressing an idea. The designs finally presented in the form of completely rendered drawings are again criticized before the class. The problems given are based upon actual American conditions, and while ideally treated, are founded on the practical requirements which the student will later have to meet in practice. Each problem when it is given out is made the basis of study —usually introduced by a lecture—of the requirements of buildings of the class under consideration. It is believed that this plan of work, while it increases the difficulty, gives the student more re-

FREEHAND DRAWING OF THE THIRD YEAR.
(Copy after J. M. W. Turner.)

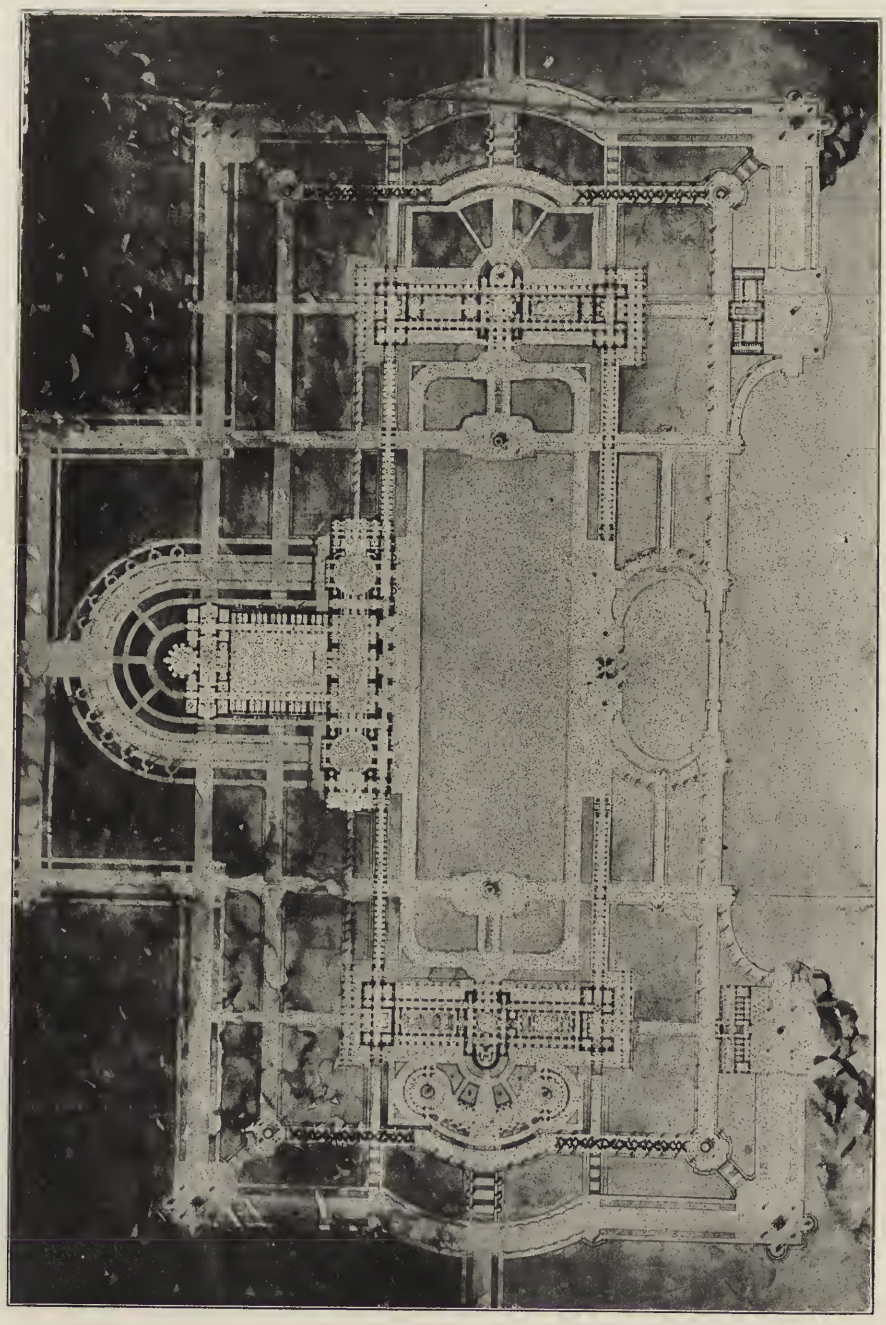
source and facility in solving the problems he will later have to meet, than would be the case if problems of more academic character were given out, with more or less fixed types of plan, often remote from the conditions and demands of actual practice. In every way the student is helped to think of his designs as actual structures, to consider and to study their appearance when built rather

than to fix his attention on his results on paper. He is taught to look through the drawing to the actual building. He is taught to base his work on precedent, the best precedents are constantly urged upon his attention, and he is encouraged to use precedent freely to attain to such fresh and spontaneous expression as he is capable of and as seems appropriate to the problem in hand. To help him to some conception of actuality in the handling of his designs, the year is begun, for all except the beginners and the most advanced students, by measuring and drawing out some existing building or important portion of a building.

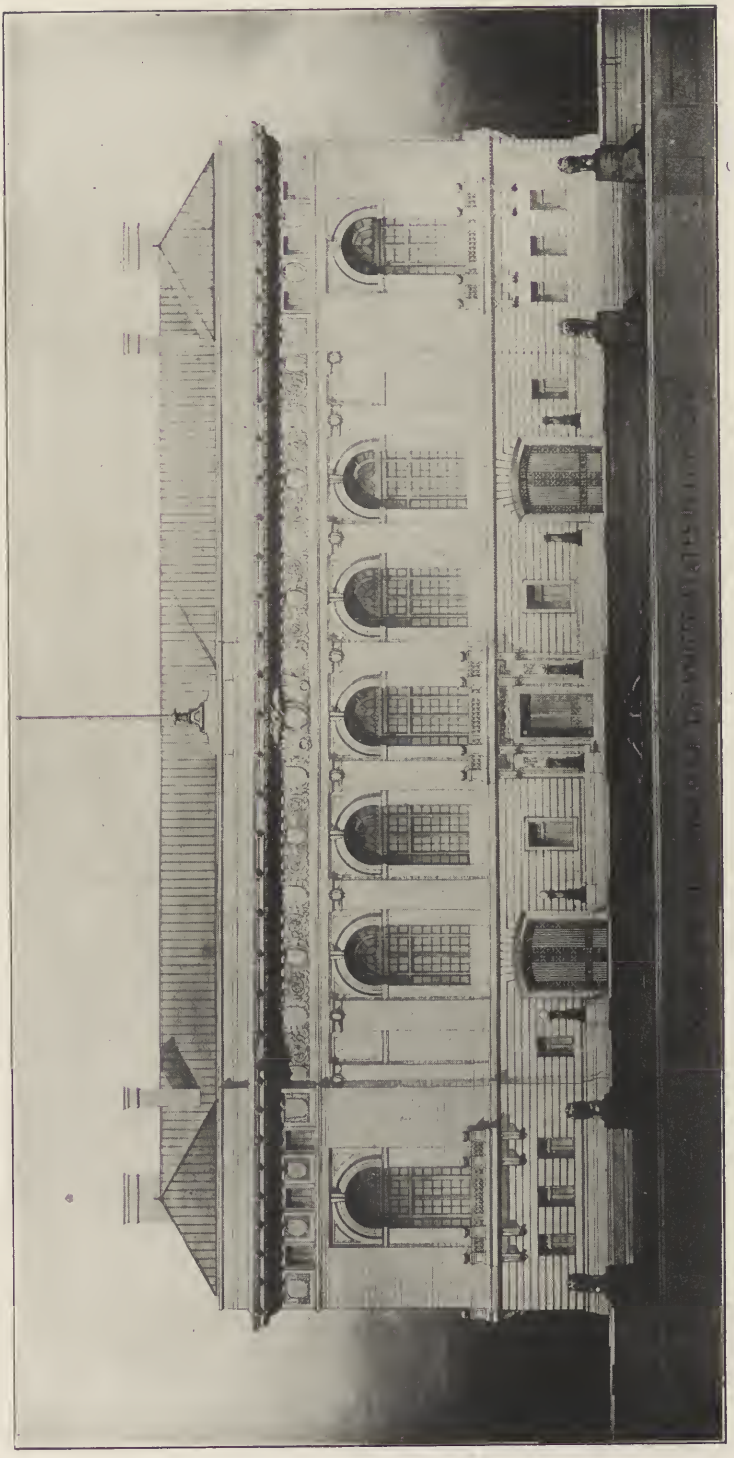
A MUNICIPAL COURT HOUSE.

The advanced work in design is carried on with the co-operation of prominent architects appointed as "Lecturers in Architectural Design," for short terms of service in rotation, who successively undertake the direction of problems. Each problem is introduced by a lecture on the general conditions and requirements of the class of buildings to which it belongs. In this way amongst other problems, school houses, university buildings, large private estates, the laying-out of city squares, city halls, town halls, hospitals and medical schools have been studied and the best solutions brought to the attention of the students. Following the introductory lecture the conditions of the particular problem to be solved are given out, and the preliminary sketches are then criticized before the class by the lecturer, who afterwards follows out in detail the development of the designs, working with the students over the drawing boards, as previously described in the case of the work of earlier years, and the final results are again criticized before the whole class. Since this method of work was introduced, Messrs. R. S. Peabody, Frank Miles Day, E. M. Wheelwright, R. C. Sturgis and C. A. Coolidge have acted in the capacity of "Lecturers." Messrs. Sturgis and Coolidge have been appointed as Lecturers in Architectural Design for the coming year. This method of work has proved exceedingly useful and stimulating and has been productive of excellent results. It is perhaps worth while to notice in this connection that the principal instructors in the Department are all practising architects.

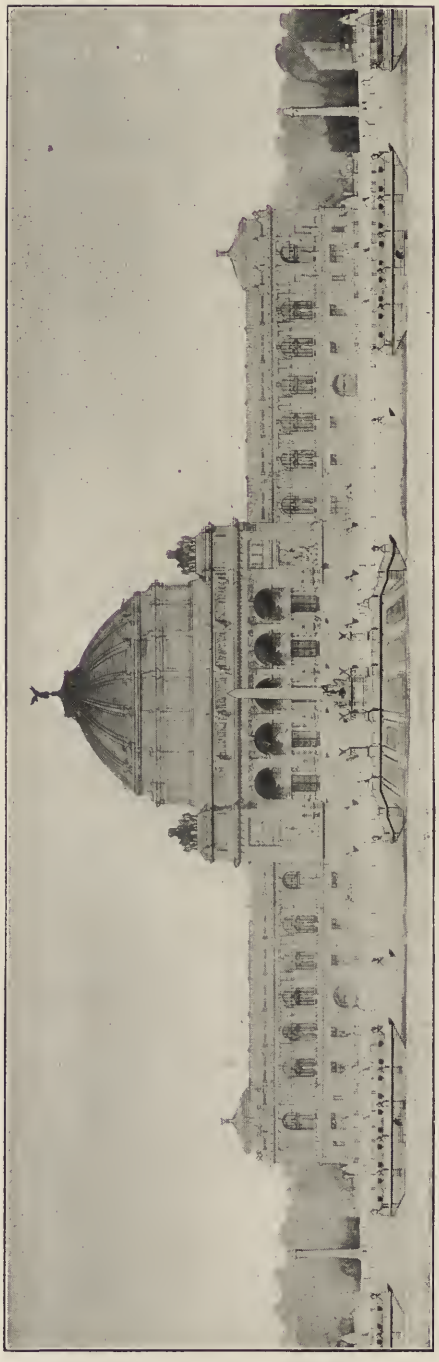
The work for the degree is finished by the preparation of a thesis design, which occupies the last four months of residence, and which is more completely



A HYDROPATHIC ESTABLISHMENT.



DESIGN FOR THE EMBASSY OF THE UNITED STATES IN LONDON.



A PEACE PALACE.

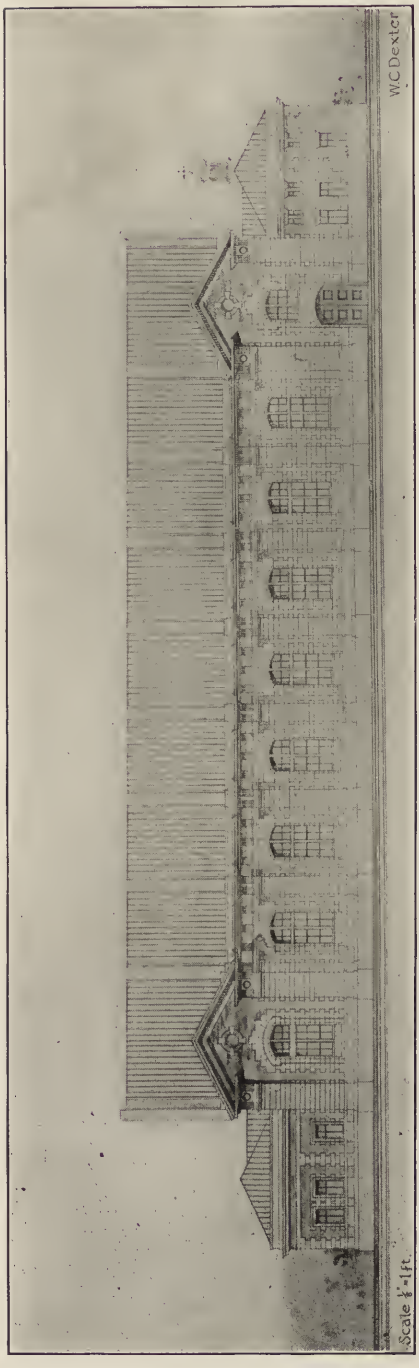
presented and more thoroughly studied than the earlier problems. It is, as it were, the summing up of the student's experience. The theses of the current year include: a large summer hotel at a southern resort; a great casino; a large city house; a school of dramatic art; a church and parish buildings; a university group; buildings for a large college in the country; a boys' boarding school; a county court house. These titles give some idea of the range of problems selected.

The Department of Architecture at Harvard disposes of two important Traveling Fellowships which are offered in alternate years. These Fellowships are each of the annual value of one thousand dollars, and the winner is reappointed for a second year if he has made good use of his opportunities during his first year. The awards are made on the results of competitive examinations in design and in architectural history. The examination in design, as is usual with such fellowships, consists of a problem for the solution of which three weeks are given. The Fellowship holder spends his two years of travel and study in Europe, under the direction of the Department, and he usually spends the greater portion of his time as a student of the American Academy in Rome. The important measured drawings which these students send back are stimulating and beautiful additions to the resources of the Department. There are also two scholarships awarded each year to students who have already taken the professional degree and who wish to remain for a year of advanced study for the higher degree. The Department welcomes properly prepared special students, whether draughtsmen from offices or others.

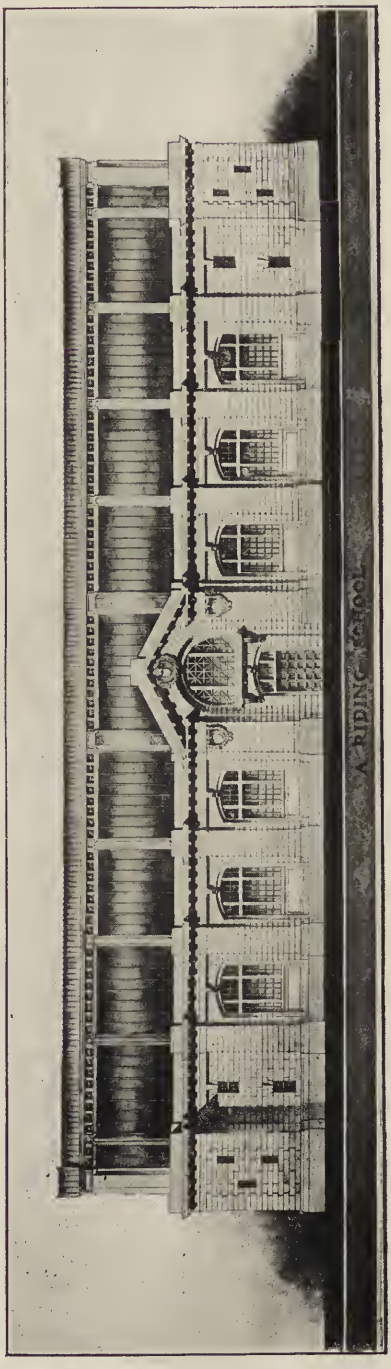
There is probably no part of the education of the prospective architect so important as the constant development of his sense of beauty, and this perhaps he gains quite as much by daily and hourly contact with the most beautiful works of past art as by instruction or the direct exercise of his own artistic faculties. It is quite certain that the constant presence of the best models, their uncon-

scious influence through daily sight and enjoyment, as well as through frequent study—drawing them, analyzing them—is not only a powerful stimulus to the imagination, but acts unconsciously in increasing artistic sensitiveness and raising the standard of taste. In this respect the Department of Architecture at Harvard is peculiarly fortunate. In the midst of the pleasant and inspiring surroundings of the oldest university of America it has in Nelson Robinson, Jr., Hall a building exclusively devoted to its use and admirably designed for its purposes, the work of Mr. McKim. Its Hall of Casts, which runs the entire height of the building, contains full-size reproductions of some of the most famous and beautiful fragments of past architecture. The Doric order of the temple of Theseus at Athens, one corner of the exquisite little Ionic temple of Nike Apteros on the Athenian Acropolis, the Ionic order of the Mausoleum at Halikarnassus, the Corinthian order of the temple of Vesta at Tivoli, a large portion of the triumphal arch of Trajan at Beneventum, the window and balcony from the Cancellaria Palace in Rome, the charming fountain by Verrocchio from the courtyard of the Palazzo Vecchio in Florence, portions of the choir screen of Chartres Cathedral, are some of the principal objects thus represented, besides cornices, capitals, altars and other smaller details. The collections also include a number of extremely interesting original marble fragments of Greek, Roman and Renaissance architecture. Several of the doorways in the building are reproductions of famous examples of Ren-

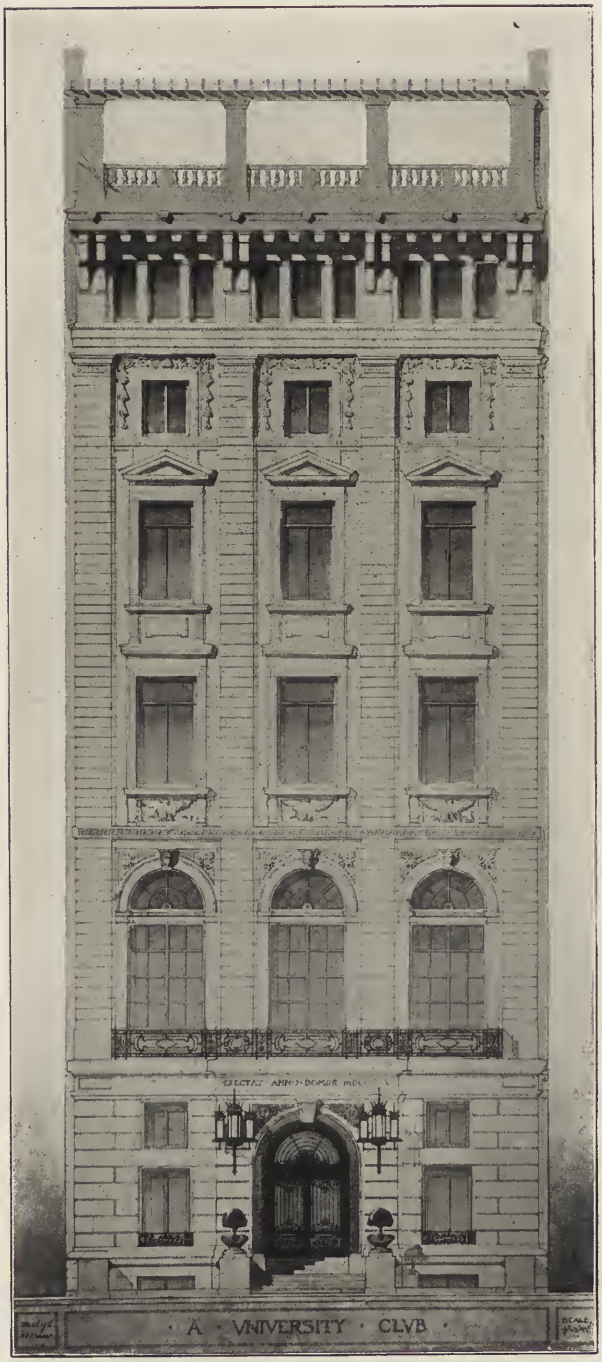
A TOWN HALL.



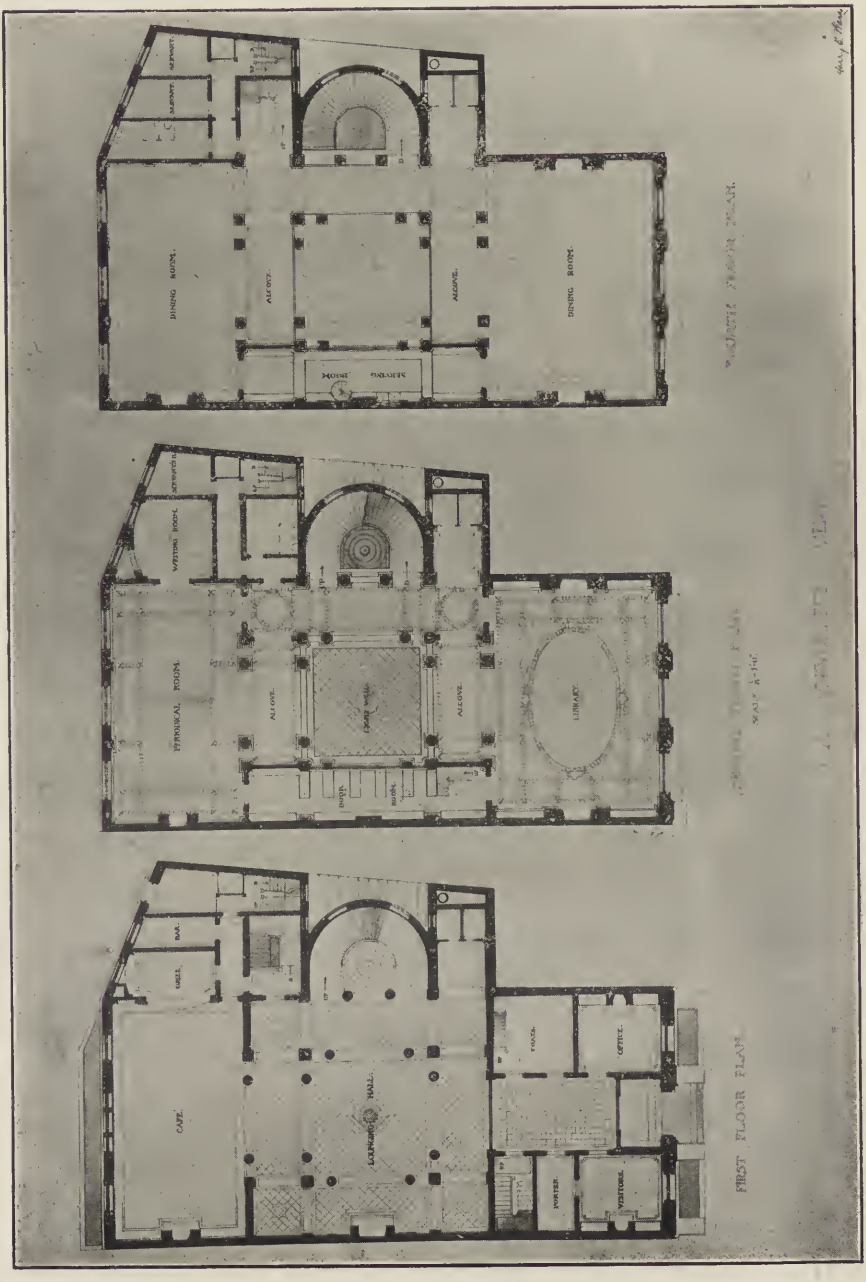
A RIDING SCHOOL.



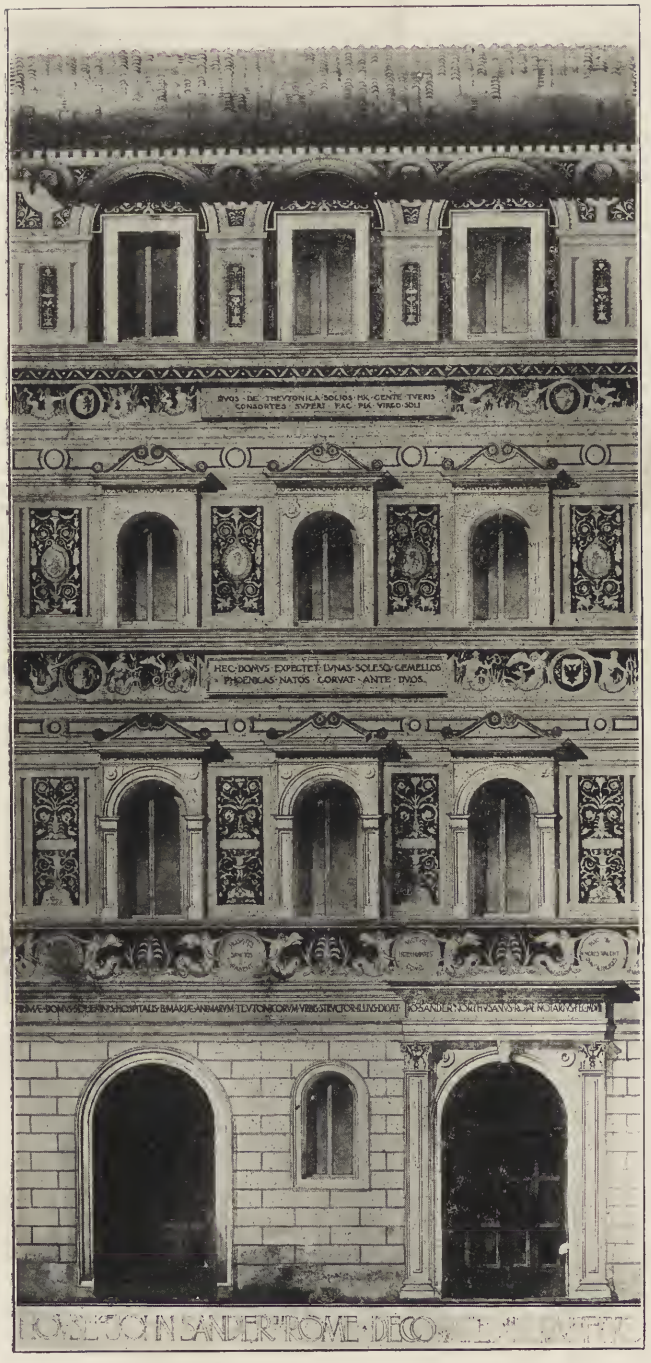
A RIDING SCHOOL.



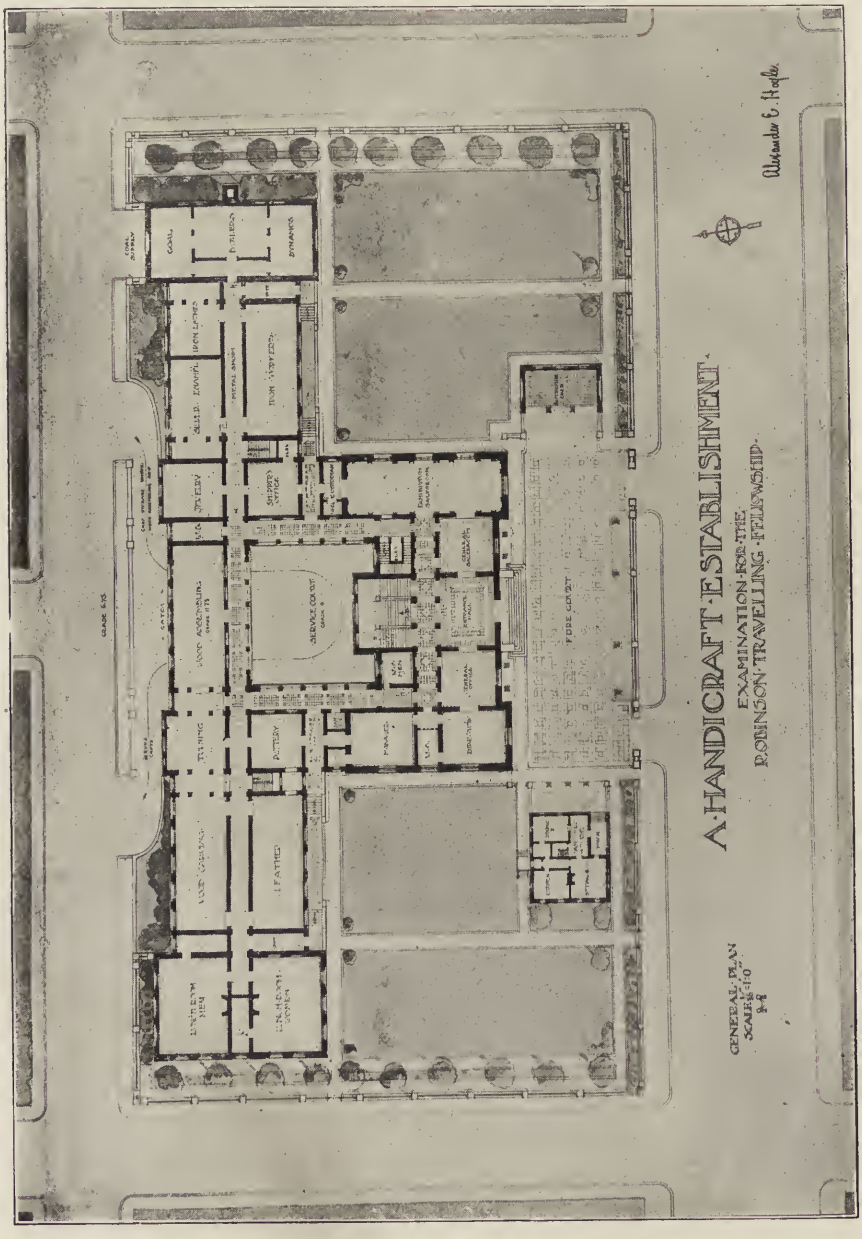
A UNIVERSITY CLUB HOUSE—ELEVATION.



A UNIVERSITY CLUB HOUSE—PLANS.

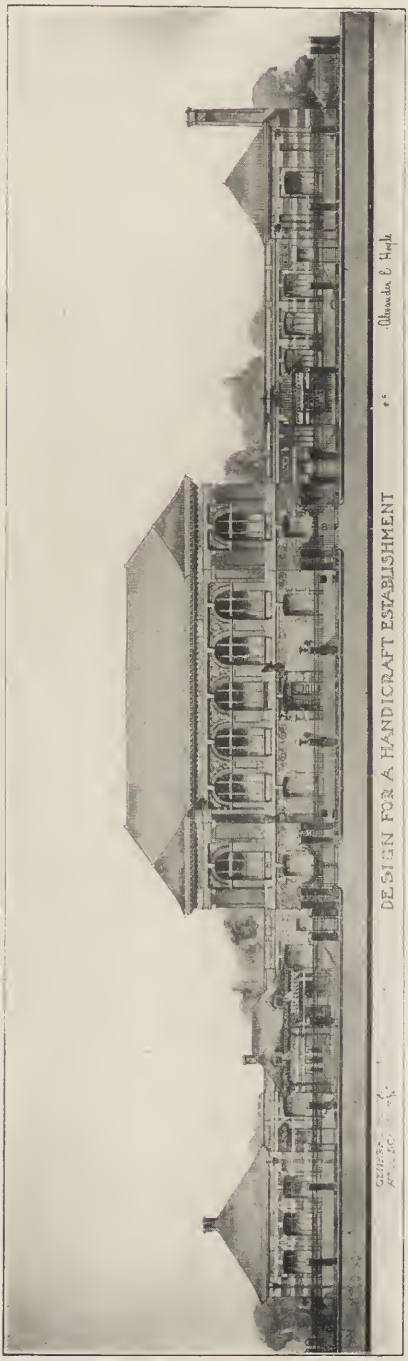


HOUSE OF JOHN SANDER, ROME.



A HANDICRAFT ESTABLISHMENT.

aissance or Classic art, and they are thus seen, not as mere museum pieces, but almost as they might be seen in the buildings for which they were designed. The freehand drawing-rooms contain casts of Gothic and of Renaissance detail, besides Eastern stuffs and bronzes, and a small but excellent collection of pencil and pen drawings, watercolors and paintings of architectural subjects, among them works by such masters as J. M. W. Turner, J. D. Harding, Prout and Cotman, besides more recent works. In the main drawing-room on the second floor, which occupies the whole length of the building, other casts and important architectural drawings are displayed. The library contains some 10,000 architectural photographs and nearly 1,400 volumes. The main lecture room is provided with two electric stereopticons placed side by side for simultaneous use in the comparison of buildings in the lectures, and there is a collection of some 8,000 lantern slides. But the collections of Robinson Hall itself are by no means all the resources of instruction and inspiration of which students in the Department enjoy the advantage. Adjoining it is the Fogg Art Museum, with its casts and beauitful paintings and its collection of 40,000 photographs of architecture, sculpture and painting, and 3,643 lantern slides. In the lecture room of the Fogg Museum the courses on the general history of the Fine Arts are given. Across the road from Robinson Hall is the Germanic Museum, with its extremely interesting and important collection of casts of German Mediaeval and Renaissance architecture, largely the gift of the German Emperor, and its large scale photographs of German architecture. The architectural building has the further advantage of near neighborhood to the University Library, which has over 8,000 works on the Fine Arts. The students make free and constant use of these collections, and from time to time books and photographs that may be specially needed in the work of the Department of Architecture are temporarily transferred to Robinson Hall. In every way the students are encouraged and aided to make the fullest and most fruitful use of these unusual resources.



HANDICRAFT ESTABLISHMENT—ELEVATION.
Awarded the Nelson Robinson, Jr., Fellowship, 1906.

H. Langford Warren.